

REMARKS

The above amendments and these remarks are being submitted in response to the Office action dated May 6, 2005 that was issued in connection with the above-identified patent application. Claims 1-33 were pending in the application prior to entry of the above amendments. By the above amendments, the specification and claims 1, 6-9, 12-13, 23-24, and 29-33 have been amended. The amendments to the specification are being made to correct typographical errors that were not detected until after the present application was filed. Applicants submit that no new matter has been introduced with the above amendments.

As an initial matter, Applicants thank the Examiner for his attention to detail in identifying the missing words (“to” and “so” in claims 6-9 and 29-32). In the above amendments, the identified informalities in these claims and claims 12 and 33 have been made. In addition, claims 1 and 24 have been amended to clarify that the recited “at least one of a mouthpiece from which a user may selectively draw drink fluid from the compartment by sucking upon the mouthpiece and a fitting adapted to interconnect the drink tube with a gas mask” is intended to mean that the downstream assembly may include a mouthpiece, a gas mask fitting, or both. In other words, while the downstream assembly may include at least one of each of these recited components, it is not required to do so. The claims have been amended to replace “and” with “or” to clarify this intended construction.

In the Office action, claims 6-9 and 29-32 were objected to as containing informalities; claims 1-13 and 21-33 were rejected as being obvious over U.S. Patent No. 4,712,594 to Schneider in view of U.S. Patent No. 5,811,359 to Romanowski; and claims 14-20 were rejected as being obvious over Schneider in view of Romanowski and further in view of U.S. Patent No. 5,074,601 to Spors et al. In view of the above amendments and the following remarks,

Applicants respectfully request reconsideration of the application under 37 C.F.R. § 1.111 and allowance of the pending claims.

Amended claim 1 is presented below and is directed to a personal hydration system that includes a multilayer chemically resistant fluid reservoir having at least one layer of waterproof material on each side of a chemically resistant layer, and a downstream assembly that extends from the reservoir.

1. (Currently amended) A personal hydration system, comprising:
a flexible fluid reservoir having a body portion with an internal compartment adapted to receive a volume of drink fluid, wherein the reservoir includes a selectively sealable fill port having an opening through which drink fluid may be added to the compartment and an exit port through which drink fluid may be selectively drawn from the compartment, wherein the reservoir is formed from a multilayered chemically resistant material that includes at least one chemically resistant layer containing ethylene vinyl alcohol and at least one waterproof layer on each side of the at least one layer comprising ethylene vinyl alcohol, wherein the chemically resistant layer is adapted to be resistant to at least mustard and sarin chemical agents; and
an elongate downstream assembly in fluid communication with the exit port and adapted to selectively dispense drink fluid to a user, wherein the downstream assembly comprises an elongate drink tube and at least one of a bite-actuated mouthpiece from which a user may selectively draw drink fluid from the compartment by sucking upon the mouthpiece and/or a fitting adapted to interconnect the drink tube with a gas mask.

As discussed above, claim 1 stands rejected under 35 U.S.C. § 103 as being obvious over Schneider in view of Romanowski. As expressed in the Office action, Schneider is cited for providing in Figs. 10-12, 14 and 20 a liquid storage and delivery system that includes a multilayered container with a flexible reservoir 82, a sealable fill port 83, exit ports 84, and an elongated downstream assembly 19 that is in fluid communication with the exit port and which has a mouthpiece and/or fitting adapter 118. However, and as the Examiner correctly recognizes, Romanowski is silent about the type of material from which the container is formed, and as such fails to disclose or suggest the multilayer construction recited in amended claim 1,

which includes a chemically resistant layer that contains ethylene vinyl alcohol and which is resistant to at least mustard and sarin chemical agents and at least one waterproof layer on each side of the chemically resistant layer. Romanowski is cited for disclosing a multilayer material for making protective garments, with the material including a layer of chemically resistant material. Therefore, the rejections require modification of the container of Schneider to include the material of Romanowski.

Applicants have studied the cited references and the reasons for rejecting the claims that were expressed in the Office action. Applicants respectfully traverse and request reconsideration of these rejections. While Applicants submit that the proposed modification, if made, does not result in the claimed subject matter, Applicants believe that this issue becomes moot because the references not only lack the required teaching or motivation to make the proposed combination, but also teach away from the proposed combination.

In applying 35 U.S.C. § 103, the references must suggest the desirability, and thus, the obviousness of making the combination. As stated by the Federal Circuit in In re Fritch, 972 F.2d 1260, 23 USPQ2d 1780 (Fed. Cir. 1992):

[T]he Examiner bears the burden of establishing a prima facie case of obviousness based upon the prior art. ‘The Examiner can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references.’ ... Under section 103, teachings of references can be combined only if there is some suggestion or incentive to do so. ... This court has previously stated that ‘[o]ne cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the invention.’

Id. at 1265-1266 (citations omitted). Moreover, the references must be viewed without the benefit of impermissible hindsight vision afforded by the claimed invention. Hodosh v. Block Drug Co., Inc., 786 F.2d 1136 (Fed. Cir. 1986).

Hindsight reconstruction is evidenced by defining the problem in terms of its solution.

Monarch Knitting Machinery Corp. v. Sulzer Morat GmbH, 139 F.3d 877, 882 (Fed. Cir. 1998).

In each of the obviousness rejections set forth in the Office action, the rejections are predicated upon solving the problem of “protect[ing] the user from exposure to hazardous environments, while the user can consume nourishment liquids.” Applicants submit that this approach is exactly what the cited case law cautions against, as the problem has been defined based upon the solution recited in claim 1, and thereby has been defined to encompass non-analogous art, namely Romanowski. Accordingly, the rejections are not properly supported and should be withdrawn. More specifically, the problem expressed in the Office action, namely, providing a personal hydration system that is resistant to chemical agents, has been defined in terms of the solution presented in claim 1, namely, providing a multilayered fluid reservoir which includes at least one chemically resistant layer that comprises ethylene vinyl alcohol and which is resistant to at least mustard and sarin chemical agents, and at least one waterproof layer on each side of this chemically resistant layer. Applicants submit that the claimed multilayer construction is but one of many possible solutions to the problem of chemical resistance in hydration systems. Thus, by defining the problem in terms of its solution, the Examiner has presumed the solution to the problem. Furthermore, this ignores the lack of any suggestion or motivation in the prior art to make the proposed combination of the prior art references. See Id.

Applicants note that there is no teaching or motivation to combine the material disclosed in Romanowski with the liquid storage system of Schneider. Perhaps more specifically, Romanowski discloses a fire resistant material that also includes chemically resistant properties. The material is specifically stated to be designed to be exterior surface cover, such as may be used for clothing, tents, and equipment covers. In contrast, Schneider discloses a flexible liner

for rigid cases. Therefore, during use, the liner is at all times encased within a rigid shell. Accordingly, there is no need, much less motivation, to provide the fire retardant and/or exteriorly durable construction of Romanowski in the liner of Schneider. Furthermore, Schneider teaches away from such a combination because the liner in Schneider is already constructed of a surface layer of polyethylene terephthalates to provide chemical resistance (col. 11, ll. 37-45). Therefore, Schneider already provides a liner construction that solves the problem presented by the Examiner. Furthermore, because of its encasement in a rigid shell, there is no need, much less motivation, to replace the liner of Schneider with the multilayer fire retardant construction disclosed in Romanowski.

The combination of the fire-retardant material of Romanowski with the liquid storage system of Schneider to create personal hydration systems having a chemically resistant layer comprising ethylene vinyl alcohol, based solely on hindsight reconstruction, is therefore improper and withdrawal of the rejection is requested. In fact, the law is “clear that the best defense against the subtle but powerful attraction of a hindsight-based obviousness analysis is rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references.” In re Dembiczak, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999) (citations omitted). A suggestion, teaching or motivation to combine or modify references “must be clear and particular.” Id. “Broad conclusory statements regarding the teaching of multiple references, standing alone, are not ‘evidence’” of a suggestion, teaching or motivation to combine references. Id. Furthermore, the Federal Circuit cautioned that combining prior art references without such a teaching, suggestion or motivation, “simply takes the inventor’s disclosure as a blueprint for piecing together the prior art to defeat patentability--the essence of hindsight.” Id.

Further, when determining whether or not there is any suggestion or motivation to combine, each reference must be considered as a *whole*, with its teachings considered only in their proper context. As reiterated by the Federal Circuit in Bausch & Lomb, Inc. v. Barnes-Hind/Hydrocurve, Inc., 796 F.2d 443 (Fed. Cir. 1986):

It is impermissible within the framework of section 103 to pick and choose from any one reference only so much of it as will support a given position to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one skilled in the art.

Id. at 448 (quoting In re Wesslau, 353 F.2d 238, 241 (CCPA 1965)). The proper context for the teaching of a reference includes “those portions of the reference that argue[] against obviousness.” Id. at 448 (citing W.L. Gore & Associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 1550 (Fed. Cir. 1983)).

Applying the law to the case at hand, Applicants submit that all of the obviousness rejections of claims 1-33, based on Schneider in view of Romanowski, should be withdrawn because there is no teaching, suggestion or motivation in either reference to modify the disclosures in those references, much less to arrive at the subject matter recited in the pending claims. Furthermore, even if the proposed combination is made, neither Schneider nor Romanowski, either alone or in any permissible combination thereof, discloses or suggests every element of the claimed invention.

Claim 1 recites in part a reservoir formed from a multilayered chemically resistant material that includes at least one waterproof layer on each side of a chemically resistant layer. In contrast to the subject matter recited in claim 1, Schneider discloses, at most, a two-layered liner disposed within a rigid case, as shown in Figs. 10, 11, and 13 below.

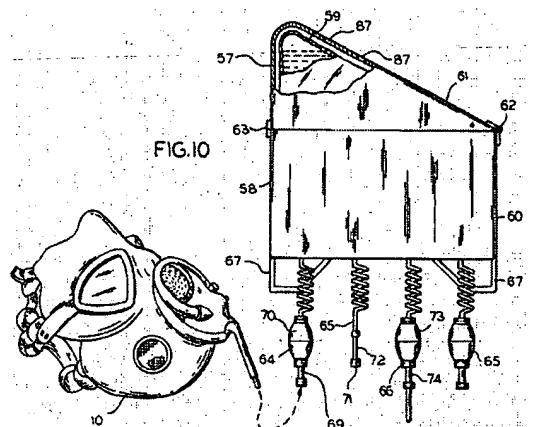


FIG. 10

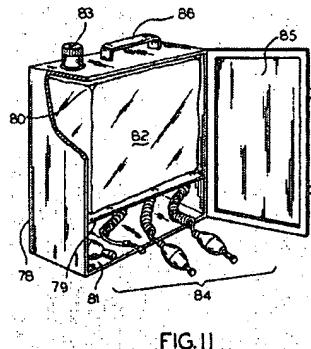


FIG. 11

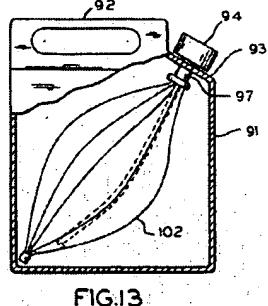


FIG. 13

Since the liner in Schneider is protected by a rigid outer case, the addition of another liner layer would be unnecessary and redundant. Romanowski discloses multi-layered fire-retardant materials for making clothing, tents, and other shelters (col. 3, ll. 55-65). Nowhere in Romanowski is it disclosed or suggested that any of the material layers are waterproof, let alone that there is at least one waterproof layer on each side of a chemically resistant layer. Therefore Applicants submit that Schneider and Romanowski, either individually or in any permissible combination thereof, fail to disclose or suggest the personal hydration system recited in claim 1. In addition, amended claim 1 recites that the downstream assembly may include a bite-actuated mouthpiece. Neither reference discloses such a mouthpiece, with Schneider, at best, disclosing a tube that may be connected to a gas mask's fluid intake port.

For at least the above reasons, Applicants request reconsideration and withdrawal of the rejection of claim 1. Claims 2-22 depend directly or indirectly from claim 1 and therefore should be allowed when claim 1 is allowed. For the purpose of brevity, Applicants are not presenting a discussion of each of these dependent claims or presenting each additional reason why these dependent claims patentably distinguish the cited references. However, Applicants want to briefly mention a few of these dependent claims to present a few additional reasons why the claims should be allowed.

Claim 2 depends from claim1 and recites that the reservoir further includes at least one heat-sealable layer on each side of the at least one layer containing ethylene vinyl alcohol. Applicants submit that neither Schneider, Romanowski, nor any permissible combination thereof discloses or suggests the subject matter recited in claim 2. At most, Schneider discloses a two-layered liner having an inner, food grade layer and an outer, chemically resistant layer (col. 11, ll. 41-45). Applicants recognize that Schneider briefly mentions heat welding of the liner to couplings (col. 9, ll. 37-43). However, only one layer of heat weldable material would be useful for attaching the liner to couplings since the liner would be inserted into the coupling or the coupling would be inserted into the liner. Furthermore, there is no disclosure in Romanowski as to how the materials are joined, and they are likely sewn together to form the desired tent or garment. Accordingly, Applicants request reconsideration and withdrawal of the rejection of claim 2 for at least this additional reason, in addition to the reasons presented above with respect to claim 1.

Claim 3 depends from claim 2 and further recites that the reservoir includes a perimeter region that is sealed with a RF-welding process. Since neither reference discloses welding the perimeter region of a fluid reservoir to seal the perimeter region of the reservoir, it follows that neither reference discloses or suggests sealing the perimeter region of a fluid reservoir utilizing a RF-welding process, much less using such a process to seal the specific multilayer reservoir recited in claim 2. As discussed, the claimed reservoir includes a chemically resistant layer that includes ethylene vinyl alcohol, a waterproof layer on each side of the chemically resistant layer, and a heat-sealable layer on each side of the chemically resistant layer. The references simply do not disclose or suggest this subject matter. Accordingly, Applicants request that the rejection of claim 3 be reconsidered and withdrawn.

Claim 12 depends from claim1 and further recites that the reservoir is sufficiently clear that the internal compartment may be viewed from external the reservoir. Applicants submit that the cited references not only fail to disclose or suggest the subject matter of claim 12, but also specifically teach away from the recited configuration. Neither Schneider nor Romanowski discloses or suggests a reservoir that is sufficiently clear so that the internal compartment may be viewed from external the reservoir. The liquid reservoir of Schneider is enclosed in a rigid case, thus precluding visibility of the reservoir entirely. Moreover, the liners are collapsible so there is no need for the liners to be clear to determine the amount of the remaining contents (col. 10, ll. 47-50). Romanowski also teaches away from clear materials as it would be undesirable for either garment or tent materials to allow viewing of their internal compartments. Applicants recognize that Romanowski discloses the transparency of Saran films (col. 1, ll. 55-61); however this discussion is merely a statement of the properties of those films and not a reference to the fire-retardant material that include these films. Perhaps more specifically, Romanowski specifically discloses that its multilayer materials include coloring and patterns, such as camouflage, on the mating fabrics to which the Saran films are joined (col. 3, ll. 45-47; col. 14, ll. 58-67; col. 15, ll. 18-26; col. 16, ll. 41-49). Accordingly, it follows that neither reference discloses the reservoir recited in claim 12, and both references specifically disclose structure that teaches away from providing a reservoir that is sufficiently clear that the internal compartment of the reservoir may be viewed through the reservoir. It follows then that claim 13 patentably distinguishes the cited references and therefore should be allowed.

Applicants submit that the cited references fail to disclose or suggest the subject matter of claim 13. Neither Schneider nor Romanowski discloses or suggests a personal hydration system including a quick-connect assembly adapted to selectively and interchangeably couple the distal

end region of an elongate drink tube in fluid communication with a bite-actuated mouthpiece. Applicants respectfully request that the rejection of claim 13 be withdrawn.

Claim 14 depends from claim 13 and further recites a more specific construction of the quick-connect assembly of claim 13. Claim 14 stands rejected as being obvious over the proposed combination of Schneider and Romanowski, with this combination further modified to include the quick-connect assembly of Spors. Applicants submit that there is no teaching or motivation to combine the quick-release connector of Spors et al. with the liquid storage system of Schneider. Applicants point out that in the obviousness rejections set forth in the Office action, the Examiner has supported the proposed combination by defining the problem to be providing “a quick connector having a resilient ring engaged with a female coupling … to reduce the time it takes to engage the protective gear with the proper attachments in an emergency.” However, the cited problem and the proposed solution thereto have been defined in terms of the subject matter recited in claim 14, which includes providing a quick-connect assembly having a resilient ring engaged with a female coupling. Applicants respectfully point out that providing a quick-connect assembly having a resilient ring engaged with a female coupling is but one of many possible solutions to the problem of reducing the time it takes to change attachments for a personal hydration system. Thus, by defining the problem in terms of its solution, the Examiner has presumed the solution to the problem. Furthermore, this ignores the lack of any suggestion or motivation in the prior art to make the proposed combination of the prior art references. The combination of the quick-release connector of Spors et al. with the liquid storage system of Schneider to create a personal hydration system including a quick-connect assembly, based solely on hindsight reconstruction, is therefore improper and withdrawal of the rejection is requested.

Independent claim 23 is directed to a personal hydration system that includes a flexible fluid reservoir that includes a sealable fill port and an exit port to which an elongate downstream assembly extends, and which is formed from a flexible, heat-sealed chemically resistant material.

23. (Currently Amended) A personal hydration system, comprising:

a flexible fluid reservoir having a body portion with an internal compartment adapted to receive a volume of drink fluid, wherein the reservoir includes a selectively sealable fill port having an opening through which drink fluid may be added to or removed from the compartment and an exit port through which drink fluid may be selectively drawn from the compartment, wherein the reservoir is formed from a flexible, heat-sealed chemically resistant material; and

an elongate downstream assembly in fluid communication with the exit port and adapted to selectively dispense drink fluid to a user.

Applicants submit that the cited references fail to disclose or suggest the subject matter of claim 23. As previously discussed, neither Schneider nor Romanowski discloses or suggests a fluid reservoir formed from a flexible, heat-sealed chemically resistant material. Moreover, neither of these references discloses an elongate downstream assembly in fluid communication with an exit port and adapted to selectively dispense drink fluid to a user. As discussed, Schneider discloses that its material may be heat-sealed to a coupling, but Schneider does not disclose (and by this omission appears to teach away from) a reservoir having a internal compartment formed by heat-sealing a flexible chemically resistant material. For at least these reasons, Applicants request the rejection of claim 23 be withdrawn.

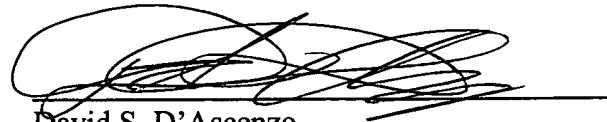
Claims 24-33 depend directly or indirectly from claim 23 and therefore should be allowed when claim 23 is allowed.

In view of the above, Applicants submit that all of the issues raised in the first Office action have been addressed and overcome. If there are any remaining issues or if the Examiner has any questions, Applicants' undersigned attorney may be reached at the number listed below. Similarly, if the Examiner believes that a telephone interview may be productive in advancing

prosecution of the present application, the Examiner is invited to contact Applicants' undersigned attorney at the number listed below.

Respectfully submitted,

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